REMARKS

This Application has been carefully reviewed in light of the Office Action mailed November 15, 2004. At the time of the Office Action, Claims 1-36 were pending in this Application. Claims 1-13 were rejected. Claims 14-36 were provisionally withdrawn due to an election/restriction requirement. Claims 1-13 have been amended to further define various features of Applicant's invention and Claims 14-36 have been cancelled due to an election/restriction requirement. Applicant respectfully requests reconsideration and favorable action in this case.

Election/Restriction Requirement

During a telephone conference with Examiner Xu on June 17, 2004, the Examiner required an election between Claims 1-13, drawn to a hybrid material, and Claims 14-36, drawn to a method of making the hybrid material. Applicant made a provisional election with traverse to prosecute the invention of Claims 1-13. Applicant hereby confirms that election. Accordingly, Applicant hereby cancels Claims 14-36 without prejudice or disclaimer and elects that the cancelled claims are subject to the filing of a divisional application.

Rejections under 35 U.S.C. § 112

Claims 11 and 13 were rejected by the Examiner under 35 U.S.C. §112, second paragraph, as being indefinite and failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant amends Claims 11 and 13 to overcome these rejections.

Rejections under 35 U.S.C. § 102

Claims 1-3 and 6 were rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 3,983,270 issued to James J. Licari et al. ("Licari et al."). The present invention is directed, *inter alia*, to a hybrid material comprising a "ceramic" and a "metal." As described in the present specification, the "metal" may be selected from Mg, Ca, Sc, Ti, Cr, Mn,

Fe, Co, Ni, Cu, Zn, Pd, Ag, Cd, Pt, An, any ionic forms thereof, and any combinations thereof. A review of the specification reveals the term "metal" is used according to its everyday plain meaning. Hawley's Condensed Chemical Dictionary, p. 717, defines "metal" as "[a]n element that forms positive ions when it's components are in solution and whose oxides form hydroxides rather than acids with water." Thus, it is clear from the definition that an "acid" is not a "metal." Indeed, the common definition notes if you add a "metal" to water it forms a hydroxide "rather than acids." Licari et al. is directed to the use of "fatty acid hydrated complexes of certain transition elements" that are not "metals" but that are "polymerized" at low temperatures." (Col. 7, lines 55-56) In addition, Licari et al. refers to the "fatty complex" as a "fatty soap" not a "metal." (Col. 7, lines 61-67) And finally, it is noted that Hawley's Condensed Chemical Dictionary defines "fatty acid" as "a carboxylic acid derived from or contained in an animal or vegetable fat or oil ... They are classed among the lipids, together with soap and waxes." (p. 487). And even Licari et al. distinguish between "fatty acid complexes" and "ceramics" and "metals." (See e.g., Col. 3, line 49-56 and compare to Col. 7, lines 49-52. Consequently, it is respectfully submitted that Licari et al. does not teach each limitation of the presently claimed embodiment of the invention, e.g., a "metal," and thus, Applicant requests withdrawal of the rejection.

Claims 1-2, 6-10, and 12 were rejected by the Examiner under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,614,043 issued to Marcus A. Ritland et al. ("Ritland et al."). Applicant respectfully traverses and submits that Ritland et al. do not teach the present embodiment of the claimed invention. In order to further define the invention, Applicant has amended Claim 1, the only independent claim, to specify an embodiment of the invention wherein the hybrid material is composed of ceramic and metal, and includes voids, i.e., space not occupied by ceramic or metal. Such a system is important for certain applications of the present invention. And it is noted that Ritland et al., directed to electronic components incorporating ceramic-metal composites, fills the entire void space of the ceramic with metal. For example, See Figure 2 (metal 250/ceramic 240) and Figure 4 (metal 450/ceramic 440). Indeed, due to the application of Ritland et al.'s alleged invention, it is important that the "molten metal infiltrates

the porosity." (Col. 2, lines 65-67). And Ritland et al. makes it clear that all of the porosity should be filled, e.g., Ritland et al. state: "In order to fill substantially all of the open porosity in the porous ceramic portions, it is necessary that ... "C(Col. 6, lines 11-20) As presently claimed, and in reference to Figure 1 of the current application, the embodiment of the invention of Claim 1 is directed to a hybrid material comprising ceramic, metal, and voids, i.e., not a solid ceramic/metal composite.

Rejections under 35 U.S.C. §103

Claims 8-10 and 12 were rejected by the Examiner under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Licari et al. as applied to Claim 1 above, and further in view of the same reference. Claims 3-5 were rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Licari et al. or Ritland et al., as applied to Claim 1 above, and further in view of U.S. Patent Publication No. 2001/0044159 filed by Mark B. Lyles ("Lyles"). Claims 11 and 13 were rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Licari et al. as applied to Claim 1 above, and further in view of the same reference. Claims 11 and 13 were rejected by the Examiner under 35 U.S.C. §103(a) as being unpatentable over Ritland et al. as applied to Claim 1 above, and further in view of the same reference.

In order to establish a *prima facie* case of obviousness, the references cited by the Examiner must disclose all claimed limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). Furthermore, according to § 2143 of the Manual of Patent Examining Procedure, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re*

Vaeck, 947 F.2d 488, 20 U.S.P.Q. 2d 1438 (Fed. Cir. 1991). Here the cited art combination does not yield all of the limitations of the claims and thus, a *prima facie* of obviousness has not been established.

The above rejected claims, i.e., Claims 3-5 and 8-13, are all dependent on Claim 1. All limitations of Claim 1 are not disclosed in Ritland et al. and/or Licari et al. and those gaps are not filled by the secondary references. Thus, withdrawal of the rejection is requested. And the citation to the Lyles publication, naming the same inventor as the present application lists, is not art of "another." Moreover, Applicant has amended the specification to claim priority thereto by designating the present application as a continuation-in-part application of the Lyles publication.

CONCLUSION

Applicant has now made an earnest effort to place this case in condition for allowance in light of the amendments and remarks set forth above. Applicant respectfully requests reconsideration of Claims 1-13 as amended.

Applicant believes there are no fees due at this time, however, the Commissioner is hereby authorized to charge any fees to Deposit Account No. 50-2148 of Baker Botts L.L.P. in order to effectuate this filing.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicant's attorney at 512.322.2606.

Respectfully submitted,
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